

ABSTRACT

A method is provided for the identification of polymorphic markers in a population. The method includes genotypically characterizing a first sample of a population, selecting one or more individuals of the first sample based upon the genotypic characterization, fabricating a microarray with genomic DNA from each individual selected, and genotyping a second sample of the population using each fabricated microarray as a reference, thereby identifying the polymorphic markers in the population. Also provided is a method for the identification of polymorphic markers in a bacterial population. The method includes phenotypically characterizing a first sample of a population, selecting one or more individuals of the first sample based upon the phenotypic characterization, fabricating a microarray with genomic DNA from each individual selected, and genotyping a second sample of the population using each fabricated microarray as a reference, thereby identifying the polymorphic markers in the population. Also provided is a method for identifying unique bits among a plurality of bit strings including providing a plurality of bit strings, wherein each string has the same number and position of bits, and each bit has a value of 0 or 1, generating a graphical representation - including selectable elements - representing the relatedness of the bit strings, making a selection of a first selectable element, making a selection of a second selectable element, and identifying bits that are present in each bit string represented by the first selectable element and absent in each bit string represented by the second selectable element, or vice-versa.